

PLYLE®

PMA82

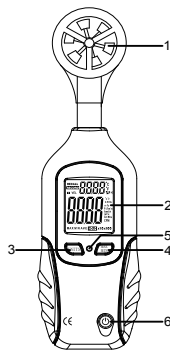
INSTRUCTION MANUAL

Introduction

Congratulations on your purchase of the PMA82 Anemometer. The PMA82 Anemometer measures air velocity in five units of measure: feet per minute (ft/min), meters per second (m/sec), miles per hour (MPH), kilometers per hour (km/hr), & nautical miles per hour (knots) & CFM (ft³/min). An internal sensor allows PMA82 to measure air temperature in Celsius or Fahrenheit units. This meter is shipped fully tested and calibrated and with proper use will provide years of reliable service.

Meter Description

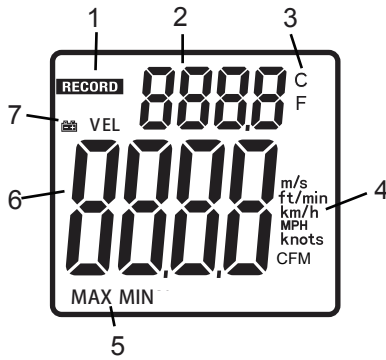
1. Vane sensor
2. LCD display
3. Units/°F/°C key
4. Max/Min key
5. Hold key
6. On/Off Key



Note: Battery compartment is on rear of unit

Display

1. MAX MIN Record mode
2. Temperature display
3. Temperature units
4. Velocity units
5. MAX or MIN mode
6. Velocity display
7. Low battery indicator



Operation

Meter Power

1. Press the POWER button to turn the meter on. If the display does not switch on, check that a fresh 9V battery is installed.
2. Press the POWER button to turn the meter off.
3. The meter is equipped with an AUTO POWER OFF feature. The meter automatically shuts off after 15 minutes to conserve battery energy.

Measuring Air Velocity and Temperature

1. Place the sensor in the air stream under test.
2. Read the Air Velocity and Temperature measurements directly on the LCD.
3. To calculate Air Volume in CFM (cubic feet per minute) or CMM (cubic meters per minute) refer to the 'Useful Equations and Conversions' section.

Selecting the Temperature unit of measure (°C/°F)

Press and hold the UNITS key for 3 seconds to select the temperature unit of measure. The meter will beep twice and the display will indicate the currently selected unit of measure.

Selecting the Air Velocity unit of measure

Press the UNITS key to change the unit of measure for Air Velocity measurements. The display will reflect the current selection. A list of measurement units is printed in the specifications later in this manual.

Record and Recall MAX / Min Function

1. To begin capturing the Maximum (MAX) and Minimum (MIN) air velocity and temperature readings, press the MAX/MIN key and the 'RECORD' icon will appear in the display.
2. Now, use the MAX/MIN key to toggle the view from MIN to MAX to RECORD. The 'MAX' or 'MIN' will appear along with the recalled reading for convenience. In RECORD mode, the meter will display the current reading but will continue to capture MAX and MIN readings.
3. To return to normal operation, press and hold the MAX/MIN key for 3 seconds to clear and stop MAX/MIN recording. The meter will beep twice and the 'MAX'/'MIN' and 'RECORD' icons will switch off.


Area Set for CFM

- Turn off the meter
- Press the HOLD key and hold
- While holding the HOLD key turn on the meter. It will now be in area set mode "set area" will display. The area range can be set from 0 to 999.9ft²
- Press the MAX/MIN key to shift the radix point (decimal point).
- Press the HOLD key to shift between flashing digits
- Press the UNITS key to change the value of the flashing digit
- After setting the area for CFM (inputting the square footage of the duct), the operator must turn the meter off, then turn the meter on again. At this point, the meter will be set to read CFM for the desired area.

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Maintenance

Battery Replacement

When the battery power falls low, the low battery icon  will appear on the LCD. Replace the 9V battery by removing the Phillips screw on the battery compartment door and accessing the battery compartment. Ensure that the compartment cover is securely fastened when finished.

Cleaning and Storage

Wipe the meter and vane with a damp cloth as needed. Do not apply abrasive, solvents, or other cleaners to the surface of the meter or vane. Store with the battery removed and avoid extreme temperature and humidity.

Specifications

Circuit description	Custom LSI microprocessor design
Display	Dual function 8888 count LCD display
Measurement units	m/s, km/h, ft/min, knots, mph, Temperature: °C/°F CFM
Data hold	Freezes reading on the display
Sensor Structure	Air velocity sensor: Conventional twisted vane arm with low-friction ball-bearing
Memory Recall	Record and Recall Maximum/Minimum (MAX/MIN) readings
Auto Power off	After 15 minutes with disable feature
Operating Temperature	32 °F to 122 °F (0 °C to 50 °C)
Operating Humidity	Max. 80% RH
Power Supply	9V battery
Power Consumption	Approx. 8.3mA DC

Air Velocity Range Specifications

Measurement	Range	Resolution	Accuracy (% of reading)
ft/min (feet per minute)	196 - 4900 ft/min	1 ft/min	± (3% + 40 ft/min)
m/s (meters per second)	1.00 - 25.00 m/s	0.01 m/s	± (3% + 0.20 m/sec)
km/h (kilometers per hour)	3.6 - 90.0 km/h	0.1 km/h	± (3% + 0.8 km/hr)
mph (miles per hour)	2.24 - 56.0 mph	0.1 mph	± (3% + 0.4 mph)
knots (nautical miles per hour)	1.94 - 48.5 knots	0.1 knots	± (3% + 0.4 knots)

Temperature Range Specifications

Range	Resolution	Accuracy
32°F to 122°F (0°C to 50°C)	0.1°F (0.1°C)	± 4.0°F (2°C)

Air Flow Range Specifications

Unit	Range	Resolution	Area
CFM (cubic feet per minute)	0-999,900 ft ³ /min	0.1	0.000-999.9 ft ²